Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

Top Secret

25X1

[redacted]

basic imagery interpretation report

Activity and Developments at Selected Soviet SSM Research, Development and Production Installations (S)

STRATEGIC WEAPONS INDUSTRIAL FACILITIES
BE: Various
USSR

Top Secret

[redacted]

25X1

RCA-09/0006/80
JUNE 1980 25X1
Copy 49

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1
Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Page Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

INSTALLATION OR ACTIVITY NAME					COUNTRY
Activity and Developments at Selected Soviet SSM Research, Development, and Production Installations					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	See below	See below	See below	See below	See below

MAP REFERENCE

SAC. USATC, Series 200, scale 1:200,000 (see sheet numbers below)

LATEST IMAGERY USED	NEGATION DATE (If required)
See "Abstract"	NA

Installation Name	Geographic Coordinates	Category	BE No	COMIREX No	NIETB (MRN No)	MAP Sheet
Dnepropetrovsk Missile Development Production Center	48-26-01N 034-48-28E	[redacted]				
Omsk Aerospace Production Plant 166	54-57-59N 073-27-48E					
Omsk Rocket Engine Test Facility Gornaya Bitiya	55-24-59N 073-17-11E					
Moskva Guided Missile and Space Research Center Reutov	55-45-47N 037-52-09E					
Orenburg Guided Missile Plant 47	51-48-18N 055-07-38E					
Moskva Missile Production Plant Fili 23	55-45-30N 037-29-28E					
Moskva Scientific Research Institute of Machine Building Ministry (NII Min-Mash)	55-51-30N 037-36-30E					
Votkinsk Missile Machine and Steel Plant 235	57-02-42N 053-59-03E					
Votkinsk Missile Final Assembly and Checkout Facility	57-02-24N 054-08-30E					

25X1

ABSTRACT

1. (TSR) This report describes developments at nine Soviet strategic missile research, development, production and testing facilities involved in SSM activity; it updates the previous SSM activity report, [redacted] on seven of the facilities and information contained in previous reports on two additional facilities. This report is based on all pertinent KEYHOLE imagery acquired through [redacted] the information cutoff date. A location map, 26 photographs, and 13 tables are included.

25X1
25X1

INTRODUCTION

2. [redacted] Each of the nine facilities (Figure 1) discussed in this report is currently or has been involved in SSM activity. Information on seven of the facilities is updated from [redacted] hrough [redacted] Two facilities, not included in the previous report,[1] are updated as follows: Omsk Aerospace Production Plant 166 from [redacted] and Omsk Rocket Engine Test Facility Gornaya Bitiya from [redacted] This report groups the facilities according to design bureau association in order to follow missile systems development more closely. The three major SSM designers involved are Utkin, Chelomey, and Nadiradze.

25X1
25X1
25X1
25X1
25X1

[redacted] 25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

BASIC DESCRIPTION

Utkin-Associated Facilities

Dnepropetrovsk Missile Development Production Center

3. (TSR) Dnepropetrovsk Missile Development Production Center (DMDPC; Figure 2 and Table 1) consists of three adjacent, functional areas—Plant 186, the location of the Utkin missile design bureau (KB), where the SS-17 and SS-18 ICBMs are produced; the Rocket Engine Test Facility (RETF) which supports the design and developmental activity of Plant 186; and Plant 192 where SAM support equipment has been observed. During this reporting period, 37,524 square meters of floorspace were added or completed at the center.

4. (TSR) **Dnepropetrovsk Production Plant 186.** There are indications that follow-ons to the SS-17 and SS-18 and new missile systems have been under development at DMDPC.[1] The SS-18 Mod 4 ICBM is currently being produced at Plant 186. A [redacted] high by [redacted] diameter canister associated with the SS-18 Mod 4 system (Figure 3) has been observed since July 1978. This canister was previously described as a light-toned hexagonal object.[1] The canister was observed on SS-18-associated canister/capsule (can/cap) trains sporadically during this period (Table 2). One or two canisters were seen on each coverage until October 1979 when six were on two flatcars. During October and November, the canisters were observed more consistently in larger numbers. The Mod 4-associated canisters were first observed at SS-18 launch complexes in May 1979, establishing the date of first deployment. All of the SS-18 silos have since been or are currently being modified. Three [redacted] meter SS-18 upper canisters were observed for the first time at Plant 186 in April 1979 (Figure 3); these canisters were also seen in May, July, and August. Probable SS-18 canister pieces (Figure 4) have been in an open storage area since at least November 1978. Cylindrical sections seen in this same area during the previous reporting period[1] were also possible SS-18 pieces. The continuing observation and location indicate that these pieces might not have passed a quality control check or might have been used for some experimental purpose. In July 1979, an unidentified, canvas-covered object (Figure 5) was observed on a short car of a three-car can/cap train. The object appeared to have a rectangular base, [redacted] meters, with a convex, oval object on top of the base. This object has not been seen at the test range or deployed sites and could be a component of a developmental ballistic missile, possibly a follow-on to a currently deployed system. 25X1

[redacted] 25X1

25X1
25X1

6. (TSR) Activity was observed in the KB area in the northeastern portion of Plant 186 throughout this period; numerous handling rings, cylinders, and work platforms were observed in the yards of the missile design and research engineer- 25X1

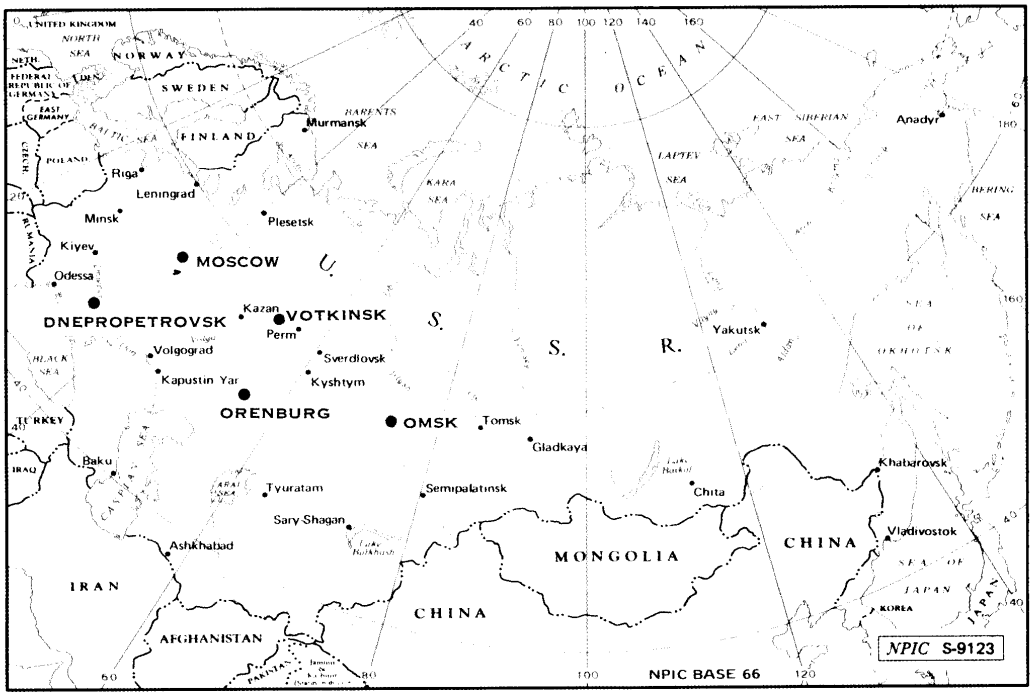


FIGURE 1. LOCATIONS OF SOVIET STRATEGIC SSM-RELATED INSTALLATIONS

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

ing buildings. In one of the yards (Figure 6), a large number of rings was consistently observed. The diameters of these rings range from [redacted] meters. Unidentified probable component crates in this yard are [redacted] A work platform was observed which had a [redacted] cut-out area indicating the size of the object for which the platform was designed. Construction was underway in the design area along the northeastern periphery of the plant, and a railspur was moved to accommodate the construction which consists of excavations and footings (Figure 2). Since February 1979, construction has been underway to separately secure and roof cover a part of the yard at the design and engineering building in the north corner of the plant. When complete, this roof cover will limit the ability to determine dimensions for all objects seen in this yard. The ability to do so in the past has led to the identification of new or modified missile systems undergoing development at the Utkin KB. Construction or completion of 14,610 square meters of floorspace throughout Plant 186 brings the current total to approximately 832,312 square meters.

7. (TSR) **Dnepropetrovsk Rocket Engine Test Facility.** Modifications to two test stands and major construction were underway at the RETF, which supports Plant 186 by testing either new or modified propulsion systems and their components. Test stand 2 has been undergoing modification since May 1978. The external appearance of the stand, flame bucket, blast apron, and terrain beyond the blast apron was substantially unchanged throughout this period. Internal modifications to the stand may also be underway. The horizontal test building (Figure 7) has been undergoing modification slowly since late 1974. Since March 1977 when a diffuser was observed in the flame bucket[4] outside, the most obvious changes to the building were additional venting and extensive plumbing on the roof. The apparently slow rate of construction indicates either that major work is being done or that the work is of relatively low priority.

8. (TSR) Major construction in the western part of the RETF has been in progress since September 1978 (Figures 2 and 8). This construction will result in a possibly propellants-related test support area. A large test support building, a concrete tower, a support building, and a probable fuel storage building (items 156 through 159, Figure 2) are externally complete. Two [redacted] meter, dark-toned, cylindrical tanks (Figure 8) have been adjacent to the probable fuel storage building since August 1979. These tanks were very probably transferred from a tank storage area possibly associated with the RETF outside and to the northeast of the RETF. This would indicate that they are used tanks and, therefore, would probably not store propellants to be used in testing. However, because of its location in the RETF, this entire area under construction is possibly propellants related.

9. (TSR) Other construction in and around the RETF included a building east of test stand 1, earth grading south of the facility, and aboveground pipelines outside the east wall. The building east of test stand 1, tentatively identified in a very early stage of construction as a possible new test stand, currently appears to be a civil defense or control bunker. In December 1979, the building was nearly complete. At that time, it appeared that the sides of the building were being hardened with concrete slabs. The building will probably be earth covered. Two areas of earth grading are south of the RETF near the separately secured, probable propellant storage facility. Additional pipelines have been buried between the storage facility and the RETF. The association between this area and the RETF is unknown. Two rows of small-diameter, aboveground pipes were being placed on cross supports along an approximately 1,200-meter-long line parallel to and outside of the eastern wall of the RETF. A small, square building marks each end and the middle of this line. This long, linear arrangement—particularly since it is near a rocket engine test facility—has some signatures of a laser range. Certain key signatures are lacking, though, which makes it impossible to identify this area, as it is currently observed, as a laser range. A total of 4,691 square meters of floorspace was added or completed at the RETF. The total approximate floorspace is 60,028 square meters.

10. ([redacted]) **Dnepropetrovsk Production Plant 192.** SAM support equipment for the SA-2, SA-3, and SA-5 missile systems[1] has been produced at Dnepropetrovsk Production Plant 192. In the recent past, ZIL-131 trucks, [redacted] vans, and R-60/-120 crates have been observed at the plant. In July 1979, a transporter which resembled a propellant transporter seen at rocket engine test facilities was seen on the transshipment apron near the west entrance of the plant. Small crates, from [redacted] long, have been seen throughout the plant. No SSM association has been made at this facility. Construction was underway in several areas, including a large multistory administration/research building (item 73, Figure 2) and footings in the southern part of the plant. The total approximate floorspace for Plant 192 is 191, 172 square meters.

25X1 25X1 25X1 25X1

Omsk Aerospace Production Plant 166

11. [redacted] The SS-4 and SS-7 missiles,[5] and the SL-8 space launch vehicle[6] have been produced at Omsk Aerospace Production Plant 166 (Figures 9 and 10 and Tables 3 and 4), formerly Omsk Airframe Plant 166. [redacted] In addition to this association, a KB, subordinate to the Utkin KB, has been identified at Omsk. [redacted]

25X1 25X1 25X1 25X1 25X1

12. (TSR) Omsk 166 consists of two areas—the main plant and final assembly and checkout facility—which are in the eastern section of Omsk. Both areas of the plant are served by road and rail. During the nearly six and a half years covered in this report, the plant was observed more

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Table 1.
Construction Activity at DMDPC

[redacted] 25X1

(Items keyed to Figure 2)

This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions (m) L	W	H	Floorspace (sq m)	Remarks
Plant 186						
39	Assem bldg					
e	Shop sect	86	29	14	2,494	
72	Fab/assem bldg					Previously iden as bldg 102
d	Addition	169	61	18	10,309	
97	Prob admin bldg	—	—	—	—	Ucon
103	Transshipment bldg					
a	Transshipment sect	49	19	14	931	
b	Admin/checkout sect	20	11	10	660	3 stories
104	Shop bldg	18	12	7	216	
	Total floorspace added				14,610	
Plant 192						
43	Unid bldg	—	—	—	—	Ucon
55	Engr bldg	24	13	8	624	2 stories
62	Engr/lab bldg	48	40	12	3,840	2 stories
63	Admin/security bldg	43	9	10	1,161	3 stories
73	Admin/research bldg					
a	Research/lab sect	63	29	10	5,481	3 stories
b	Admin/engr sect	85	11	29	6,545	7 stories
74	Footings	—	—	—	—	Ucon
75	Support bldg	26	22	6	572	
	Total floorspace added				18,223	
RETF						
148	Unid bldg	25	27	—	—	Ucon
149	Components test bldg	22	19	Various	418	
155	Transshipping support bldg	37	13	6	481	
156	Test support bldg					Externally complete
a	Test support sect	48	48	10	2,304	
b	Admin/engr sect	36	13	6	936	2 stories
157	Support bldg	13	12	10	156	Externally complete
158	Tower	6	6	14	36	Externally complete
159	Prob fuel storage bldg	30	12	8	360	Externally complete
	Total floorspace added				4,691	

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1

Page Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Table 2.
SS-18 Canisters and Railcars at DMDPC Plant 186
This table in its entirety is classified TOP SECRET RUFF

Date	Mission No	24-m Missile component Railcars	SS-18 Canisters	SS-18 Canisters	SS-18 Canisters	SS-18 Canisters	Empty Can/Cap Trains
		24	0	0	0	0	2
		18	2	0	0	0	0
		at least					
		27	0	0	0	0	3
		28	0	0	0	0	3
		38	0	0	0	0	0
		37	1	0	0	0	3
		40	4	2	3	0	7
		48	0	0	0	0	7
		42	0	0	0	0	6
		35	1	1	1	0	8
		27	0	0	0	0	5
		36	1	0	1	0	3
		43	0	0	0	0	8
		49	0	0	0	0	6
		39	0	0	0	0	3
		19	1	1	1	0	6
		39	0	0	0	0	6
		26	1	1	1	0	4
		38	0	0	0	0	3
		35	0	0	0	0	5
		38	0	0	0	0	8
		38	0	0	0	0	13
		29	1	6	0	1	7
		30	1	0	0	1	3
		26	0	6	0	0	3
		at least					
		25	0	3	0	0	3
							at least
		34	0	6	0	0	1
							at least
		27	0	0	0	0	2
							at least

than 100 times, and missile component railcars, crates, rings, domes, cylinders, and aircraft pieces were usually seen at the plant. Construction has occurred primarily in the final assembly and checkout facility (Figure 10 and Table 4). Although construction has taken place in the main plant, the major activity was the razing of three large shop and warehouse buildings, totaling 24,972 square meters of floorspace.[3] Construction is likely to begin soon in these areas. During the reporting period, 19,398 square meters of floorspace were added to the main plant, and 71,510 square meters were added to the final assembly and checkout facility for an overall total of approximately 314,874 square meters of floorspace.

13. (TSR) Chamfer-roofed crates (Figure 11), which may be space related have been observed in the final assembly and checkout facility since March 1976. The crates have been observed consistently on dropbed railcars in various positions along the railspur. No more than three crates have been seen at one time, and they were often coupled with POL tank cars. Crates similar to these have been seen at Kuybyshev Aerospace Production Plant 1.

14. (TSR) A high level of activity was observed at the final assembly and checkout facility in January 1980. Five missile component railcars—the high for the period (Table 5)—and a number of different types of railcars were in the facility. Twelve railcars were observed positioned along the spur leading into the large final assembly building (Figure 12), where railcars were not often observed. This activity could indicate that the newly constructed sections of the assembly building were operational and/or a new program was underway. The assortment of railcars and objects on railcars at this time included 24-meter missile component railcars; POL tank cars; an elongated hexagonal car, long; and a cylindrical object. An unidentified cylinder, was also observed in the assembly and checkout facility.

15. (TSR) A transporter has been seen in the main plant on several occasions since May 1975. The transporter resembles an SS-11 transporter but is probably an inplant, general-purpose transporter. The transporter was often near the largest manufacturing building and has only been observed canvas covered. No other large equipment has been identified in the main plant. Railcars were usually seen, but a 24-meter missile component railcar was seen only once in this area. Various heavy-duty vehicles were often observed in the final assembly and checkout facility. SA-5 transporters, which have been identified at numerous Soviet industrial facilities, were observed in the vehicle maintenance area. An unusual cylindrical tank has been in both the vehicle maintenance area and a paved area to the south which was possibly being used as a reconnaissance target area. The tank has been observed on the flatbed of a truck and on the ground and has been seen at the facility since at least June 1979. The tank is unusual in that it has two top central ports and is longer than the POL tank car usually seen at the facility.

25X1
25X1
25X1
25X1
25X1
25X1
25X1
25X1
25X1
25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1
Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Page Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1

16. (TSR) Various sizes of cylinders, domes, and rings—some of which were handling rings—were consistently seen in several areas of both the main plant and the final assembly and checkout facility. The diameters of these possibly missile- and space-associated objects range from approximately [redacted] As of June 1979, the largest number of objects were from [redacted] meters in diameter. In 1976, a majority of these objects were [redacted] in diameter which equates to the diameter of the SL-8 second stage.

17. (TSR) Aircraft and aircraft pieces have been identified in the final assembly and checkout facility and have been a consistent, identifiable feature of the facility since the 1950s. Some aircraft production/refurbishment may have been in progress at the facility as recently as August 1976, when a complete FIDDLER aircraft was on the pavement northeast of the assembly building. Since September 1977, CAB aircraft fuselages have been observed, and additional aircraft wing pieces have been observed since September 1978. These items do not necessarily indicate aircraft production but do signify that the plant continued to have some association with the aircraft industry, as well as the missiles and spacecraft industries.

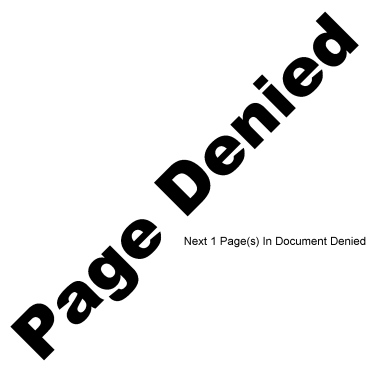
Omsk Rocket Engine Test Facility Gornaya Bitiya

18. [redacted] Omsk Rocket Engine Test Facility Gornaya Bitiya (Figure 13 and Table 6) is involved in acceptance and product improvement testing[10] of missile and space engine systems, aircraft engines, and helicopter rotors. The RETF supports the work of Omsk Aerospace Production Plant 166 and Omsk Aircraft and Missile Engine Plant Baranova 29 [redacted] The test facility is 28 nautical miles (nm) north of Omsk and is connected to the city by road and rail. It consists of a test area, a pre- and postfire operations area, a propellants storage area, a support area, and a nonadjacent waste treatment area. 25X1 25X1 25X1 25X1 25X1

19. [redacted] Systems which have probably been tested at Omsk include the SS-4, SS-5, SS-7, and SL-11.[11] The SL-8 is also associated with this facility because the system's first stage uses a modified SS-5[11] and because Omsk Plant 166 is involved with the SL-8 program. 25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8



Next 1 Page(s) In Document Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1

Table 5.
24-Meter Missile Component Railcars* at Omsk Aerospace Production Plant 166

This table in its entirety is classified TOP SECRET RUFF

Date**	Railcars	Date	Railcars
	4		1
	3		3
	4		3
	3		3
	2		3
	0		2
	3		2
	4		2
	3		2
	3		3
	2		2
	3		2
	2		2
	4		3
	2		3
	4		3
	4		3
	4		4
	4		5
	3		
	3		
	3		

25X1

*Railcars were all observed in the final assembly and checkout facility except in February 1979 when one was observed in the main plant.

**Counts are monthly averages for those months when usable coverage was available.

23. (TSR) Other objects and equipment observed at Omsk RETF included railcars, cylinders, and rings. A chamfer-roofed refrigeration railcar has been observed at the facility throughout the reporting period but until June 1979 had been off the railspur as if it had not been functioning. Since June, the car has been on the railspur in the support area near the two cryogenic tanks. At least eight small-diameter cylinders, [ ] long by [ ] in diameter, were observed on the ground near test stand 1 in October 1979. These cylinders may be used in modifying the stand or may be a part of the test program. Metallic rings were observed in back of test stand 1 in May 1976. They appeared to be handling rings, but no system association can be made.

Chelomey-Associated Facilities

Moskva Guided Missile and Space Research Center Reutov

24. [ ] Moskva Guided Missile and Space Research Center Reutov (Figure 16) is a chief component of the V.N. Chelomey KB.[1] Developmental work on ICBM, space, and cruise missile systems has taken place at this facility.

25X1

25. [ ]

25X1
25X1
25X1

25X1

25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1
Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Table 6.
Construction Activity at Omsk Rocket Engine Test Facility Gornaya Bitiya–
(Items keyed to Figure 13)
This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions (m) L	W	H	Floorspace (sq m)	First Observed Ucon	Complete	Remarks
11	Steamplant							
b	Sect	22	18	11	396			
28	Messhall							
b	Sect	18	12	3	216			
55	Stack	—	3	30	—			
56	POL tank	—	12	10	—			Capacity 1,090 cu m
57	POL tank	—	19	12	—			Capacity 3,253 cu m
58	POL tank	—	19	12	—			Capacity 3,253 cu m
59	Support bldgs (3)		Irreg		266			
60	POL tank	—	12	9	—			Capacity 945 cu m
61	Support bldg	23	Irreg	3	208			
62	Aircraft engine test bldg							
a	Test sect	33	22	Irreg	726			
b	Support sect	16	13	9	208			
c	Exhaust tube	22	5	—	—			
d	Exhaust tube	22	5	—	—			
63	Engine checkout bldg							
a	Checkout sect	30	15	11	450			
b	Checkout sect	30	18	11	540			
c	Support sect	8	7	5	56			
64	Waste treatment bldg	24	19	7	—			
65	Waste treatment basin	89	30	—	—			
66	Support bldg	14	6	4	84			
	Total floorspace added				3,150			

25X1

26. (TSR) The Reutov facility remained active in the cruise missile program during this period. Shifting of crates and equipment in the storage yard of the aerodynamic test building (Figure 17 and Table 7) has been observed during the reporting period. Some work on the SS-N-3/-12 and SS-N-7/-9 naval cruise missiles, and systems related to these may be in progress. Additionally, a new cruise missile is possibly under development at the facility. An NK-8 aircraft engine crate was identified in the storage yard during the period; this crate has been present since August 1978. The use of this engine in a cruise missile would result in a large missile. However, modifications might be made which would decrease the size of the engine. Moskva Reutov is a likely candidate for the development of a strategic cruise missile, particularly a sea-launched cruise missile (SLCM), although no collateral information has as yet identified the facility with such a program.

27. (TSR) Two large-diameter handling rings were observed in May 1979 which indicated that work was being conducted on ICBM or space systems. The rings have an outer diameter of meters and an inner diameter of One of the rings was on the pavement south of the high-bay checkout/assembly building and the other in the storage yard of the aerodynamics test building.

28. (TSR) Construction during the period was at a normal low level for this facility. Floorspace was increased by 2,107 square meters, bringing the current total to approximately 243,129 square meters. Two areas are under construction which will increase the floorspace. One area is next to the engine test cell at the facility. A portion of a nearby warehouse was razed to make way for this construction. The excavation and footings may be intended to support additional developmental testing. The second area under construction is in a newly secured area along the north-central periphery. The footings were estimated to cover approximately 1,900 square meters. Some upgrading of the research center has occurred. Two stacks were replaced at the steamplant, and grassy areas were paved along the northeast periphery where POL tank cars were seen and around the new engineering building in the northwest part of the facility.

25X1

Orenburg Guided Missile Plant 47

29. (

25X1
25X1

25X1

25X1
25X1

The status of current SS-11 ICBM production at Orenburg is unknown. The recent increase in activity at some of the SS-11 launch complexes has not been reflected in any way at this production plant. SS-11 component canisters which had been seen in large numbers until mid-1978 apparently were no longer in production. This could be an indication that the SS-11 missile system production program has ended at Orenburg 47.

25X1
Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

31. [redacted] SS-18 ICBM canisters (Figure 19 and Table 9) were seen for the first time at this plant in March 1979 and were seen on all subsequent imagery. The [redacted] canisters have been seen whole and in pieces, and both with and without a framework structure partially concealing them. A total of five [redacted] SS-18 canisters and two can/cap trains were observed at the plant from March 1979 through January 1980. The only visible alterations to the canisters were sectioning and treating with a substance which created a smooth, light-toned surface. Two treated sections were seen on railcars in July. There is no evidence to indicate to date that Orenburg 47 is involved in the production of the SS-18 missile, and it is unlikely that the fiberglass canister for the missile would be undergoing refurbishment for refiring. At least one of the canisters seen at Orenburg was expended. Additionally, the plant has been used in the past as a production facility for Chelomey-designed systems. Therefore, it would be unusual for the plant to undertake work to support a Chelomey rival, Utkin, who developed the SS-18 system. A possible reason for the canisters at Orenburg is that they could be undergoing preparation for use as storage containers, personnel shelters, or for civilian use. An area of excavated earth in the northwest corner of the plant near the buried SS-11 canisters may be associated with the SS-18 canisters. With the limited information available, however, the possibility that Orenburg 47 might be involved in the SS-18 production program cannot be dismissed.

32. [redacted] A new possible cruise missile may be in flight test production. A [redacted] long crate with beveled sides was first observed in January 1980 (Figure 20). The top width of this crate is [redacted] and the middle width is [redacted] meters. The approximate height is [redacted] Six of these crates were observed in the transshipment area which is associated with cruise missile production. Because this is the first known observation of this crate, its appearance at Orenburg may indicate prototype production or more probably production for flight testing. Similarly, the FAD-706 cruise missile crate, which was not identified at the plant during the current reporting period, was produced at Orenburg during the 1975–78 period probably only for the flight test program. The SS-N-7/-9 cruise missile crates continued to be observed in small numbers, except in November 1978 when 32 were seen.

33. (TSR) A new probable DR-1 drone crate (Figure 21) has been observed since June 1979 and seen in large numbers since January 1980. The crate has been identified only in the crate shop area to date. With the exception of a [redacted] meter box attached to the top of the crate at one end, the crate is identical to the DR-1 type B crate. The increase in the number of new type crates was accompanied by a significant reduction in the number of DR-1 type B crates.

34. (TSR) During the current reporting period, newly completed buildings accounted for an additional 9,166 square meters of floorspace, bringing the total approximate floorspace at the plant to 368,048 square meters. Expansion of the plant was continuing adjacent to the northern wall. An area of 11 hectares was walled off. This area contains a probable assembly building, a shop building, two security buildings, and a building under construction. No products were identified in this new area. A roadway connects this area to the rest of the plant. A wall-secured, 7-hectare area under construction outside of the northeastern corner may also be a part of the plant. A civil defense bunker was in the late stage of construction within the plant, increasing the total number of bunkers to four in the eastern half of the plant. Footings for a large building have been partially poured in the southeastern corner of the plant. 25X1 25X1 25X1

Moskva Missile Production Plant Fili 23

35. [redacted] 25X1

[redacted] 25X1

[redacted] Space-launch vehicle production is a major part of the total production at this facility and is discussed in an NPIC report, [redacted] on activity at Soviet space-related research, development, and production facilities. Many of the unidentified objects observed at Moskva Fili 23 could be either space or SSM related. 25X1 25X1

[redacted] 25X1 25X1 25X1 25X1 25X1

Much of this work paralleled that performed at Orenburg Plant 47. The capabilities and responsibilities mentioned above are indicative of the specific functions of the plant that can apply to any missile or space system being developed or produced at the plant.

37. (TSR) Activity at Moskva Fili 23 during this period included the construction of approximately ten new buildings and additions to four existing buildings; and the appearance and movement of 24-meter missile component railcars, handling rings, dollies, crates, and objects. A comprehensive construction update is included in the space-related facilities report. In July 1979, from 15 to 20 unidentified crates, [redacted] were alongside the rail line in the east-central part of the plant. These crates probably contain components for one of the systems produced at the facility, but a specific association cannot be made. Three dollies were observed on a parking apron in the central plant area. Their [redacted] width indicated that they carry SS-11/-19 components. Dollies similar to these have been seen elsewhere in the plant. Rings have been observed which would also indicate SS-11/-19 handling. Additional handling equipment within the plant suggests larger diameter products, such as space-launch vehicles. Twenty- 25X1 25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Page Denied

Next 1 Page(s) In Document Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1

[redacted]

Table 7.
Crates Seen at Moskva Reutov
This table in its entirety is classifield TOP SECRET RUFF

Date	Mission No	SS-N-3/-12	SS-N-7/-9	SS-19 Payload Assoc	NK-8
[redacted]		6	5	3	1
		6	5	3	1
		6	5	3	1
		5	8	3	1
		5	8	3	1
		5	7	3	1
		5	7	3	1

25X1

four-meter missile component railcars were seen on all imagery of the plant during the reporting period.

25X1

[redacted]

Nadiradze-Associated Facilities

Moskva Scientific Research Institute of Machine Building Ministry (NII Min-Mash)

[redacted]

39. (TSR) Major construction is underway at the institute which is a continuation of a construction program which began late in 1973. A large area in the northern corner of the facility has been separately wall secured and under construction since May 1979. Footings for at least two buildings have since been poured. The old, earth-covered, probable test facility was dismantled because of construction in this area. Other construction during the period consisted of new administration and support buildings and the completion of an engineering building. The addition of 6,836 square meters of floorspace increased the total to approximately 96,231 square meters.

25X1

[redacted]

25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1
Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Page Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

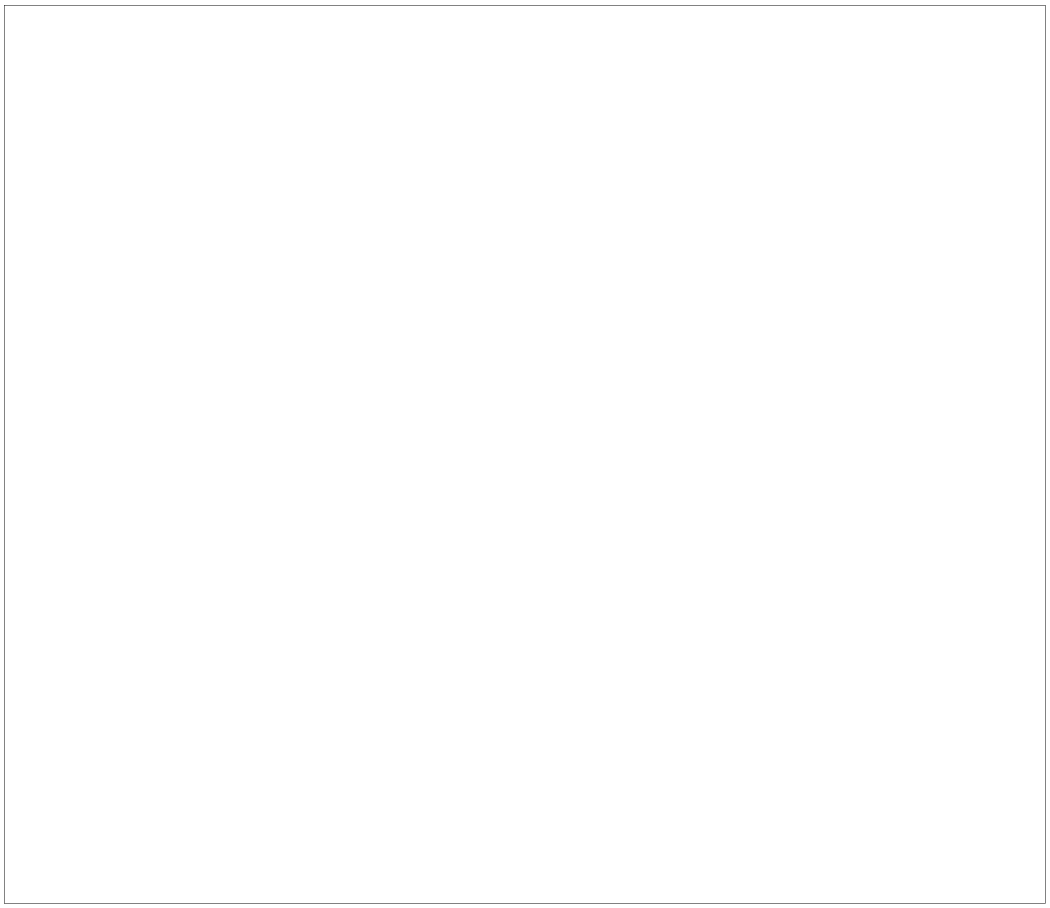
25X1

Table 8.
Construction Activity at Orenburg Guided Missile Plant 47–
25X1
(Items keyed to Figure 18)

This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions (m)			Floorspace (sq m)
		L	W	H	
36	Heat treatment bldg				
b	Addition	132	26	14	3,432
76	Heating plant				
c	Addition	54	24	17	1,296
d	Addition	53	13	12	689
90	Shop bldg	78	18	11	1,404
91	Security bldg	16	6	5	96
92	Civil defense bldg	43	18	—	774
93	Transshipment bldg	35	13	5	455
94	Support bldg				
a	Sect	16	12	3	192
b	Sect	20	18	3	360
95	Support bldg	36	13	4	468
	Total floorspace added				9,166

25X1



25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8
 25X1

25X1

Table 9.
Crates, Canisters, and Railcars at Orenburg Guided Missile Plant 47
This table in its entirety is classified TOP SECRET RUFF

Mission No	Date	DR-1* Type B Crates	New Prob DR-1* Crates	SS-19 Payload Crates	SS-18 Canisters	New Prob Msl crates	SS-N-7/-9 Crates	24-m Msl Component Railcars
		167	0	0	0	0	32	4
		113	0	0	0	0	8	7
		81	0	1	1	0	10	5
		96	0	1	1 in 4 pieces	0	14	4
		93	0	1	1 in 4 pieces	0	7	3
		69	0	1	1 in 4 pieces	0	6	2
		86	0	0	1 in 4 pieces	0	3	7
		92	0	1	1 in 4 pieces	0	9	6
		94	0	1	1 in 4 pieces	0	0	3
		87	0	1	1 in 4 pieces	0	7	2
		89	0	1	1 in 4 pieces	0	6	4
		100	0	1	1 in 4 pieces	0	4	4
		89	0	1	1 in 4 pieces	0	5	10
		96	0	1	1 in 3 pieces	0	4	8
		109	0	1	2 & 1 in 3 pieces	0	2	6
		117	2	1	2 & 1 in 3 pieces	0	5	7
		82	2	2	2 & 1 in 3 pieces	0	5	3
		109	2	2	2 & 1 in 3 pieces	0	5	6
		102	1	0	2 & 1 in 3 pieces	0	12	4
		90	1	0	2 & 1 in 3 pieces	0	6	3
		113	0	0	2	0	2	5
		117	1	0	—	0	4	2
		89	0	0	4 pieces	0	6	3
		99	0	0	4 pieces	0	4	9
		95	0	0	6 pieces	0	4	8
		74	0	0	6 pieces	0	7	10
		45	0	0	2 & 7 pieces	6	2	9
		66	3	0	2 & 6 pieces	2	1	10
		47	26	0	2 & 6 pieces	6	2	11
		46	28	0	2 & 6 pieces	6	1	9

*Formerly designated LA-17.

25X1

25X1

25X1

25X1

40. (TSR) Small, scattered crates and cylinders were often seen in the open storage area in the eastern corner of the facility. In May 1979, the following objects were observed: three cylinders, each approximately in diameter—dimensions which are equivalent to the SS-16 second stage; a nearly-square crate, and a short upended cylinder, approximately in diameter—the SS-16 first stage diameter. Mensuration of the numerous, smaller objects observed in this yard was not possible because of the lack of high-resolution imagery.

Votkinsk Missile Machine and Steel Plant 235

25X1

42. (TSR) Numerous unidentified objects, rings, crates, and railcars were usually seen at Plant 235. Twenty-four meter missile component railcars were seen in all areas of the plant (Table 11). A high count of 25 railcars was noted in December 1979 signifying a high level of activity at that time. Rings, crates, and unidentified objects were seen throughout the facility during this period. Because this facility produces a number of civilian products in addition to its military production, many of the objects are probably associated with the civilian industry. A sampling of rings (possibly handling rings) and short cylinders have diameters which range from Small, square crates of were seen which probably contained component parts. Additionally, crates have been observed in the transshipment/storage area. Metallic objects which may be parts for machine tools and for the construction industry were also seen in various areas of the plant.

25X1

25X1

25X1

25X1

25X1

25X1

25X1

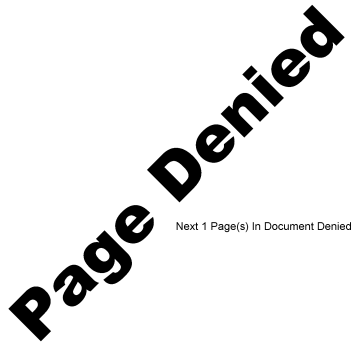
25X1

43. (TSR) Construction activity has continued during the reporting period. A fabrication building (item 80, Figure 24) was externally complete in the south southeastern part of the plant. This building and three, possibly associated buildings (items 82 through 84) comprise the major

 25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1
Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8



Next 1 Page(s) In Document Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Table 11.
24-Meter Missile Component Railcars at Votkinsk Missile Machine and Steel Plant 235
This table in its entirety is classified TOP SECRET RUFF

	Main Plant	Transshipment/ Storage Areas
	4	11
	4	10
	4	15
	1	6
	0	15
	0	1
	0	16
	0	15
	7	18

25X1

construction. This area of new construction, which is an extension of the main plant area, has not yet been wall secured. Another fabrication building (item 81) was nearly complete by the beginning of this reporting period. The majority of construction has been in the southeastern part of the plant since February 1975. Since most of this construction was nearly complete and no new large fabrication buildings were in the early stages of construction, the plant probably now has the capacity needed to produce all the missile systems for which it will be responsible for the next several years. Current estimated floorspace is 452,423 square meters. This total includes the 39,970 square meters added during this reporting period.

Votkinsk Missile Final Assembly and Checkout Facility

[redacted] Additional construction has continued in the southern portion of the facility. Work was still underway on the probable garage and two civil defense bunkers. Two storage tanks have also been installed northeast of the new assembly/checkout building. Very little construction activity was observed elsewhere in the facility. A total of 5,847 square meters of floorspace was added during the reporting period.

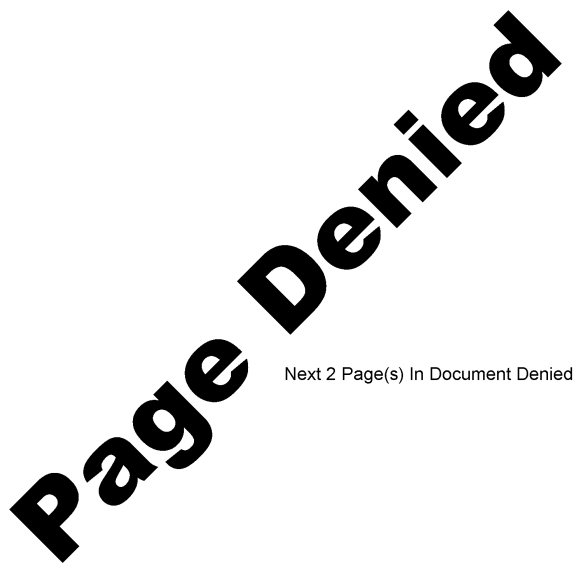
46. (TSR) The appearance and movement of railcars, crates, and cylinders were indications of activity levels. Twenty-four-meter missile component railcars were observed on all imagery of the facility (Table 13). A high level of activity for this period was observed on [redacted] when a total of 28 missile component railcars was observed. Twelve of the 28 railcars were in the transshipment area. Efforts to roof cover an additional large portion of the transshipment area appeared to be underway (Figure 26). Enclosing this area will hamper considerably any attempt to determine activity levels. 25X1

47. (TSR) A small number of crates and cylinders was observed at the facility. Peak-roofed crates on railcars which have been observed since at least 1977 were also observed during the current period. In December 1978, eight peak-roofed crates, [redacted] were observed (Figure 27). In January 1980, two peak-roofed crates, [redacted] wide, were observed. The peak-roofed crates and smaller crates were often seen along the rail line in the facility. Because of the function of the facility and the position of the crates within the facility, it is assumed that the crates are missile associated; however, no system association has been made from imagery. Likewise, no system association has been made with cylinders at the facility. Cylinders were not seen as frequently as crates, but their presence is not unusual. The cylinders have consistently been seen on railcars. Dimensions for a selection of cylinders follow: [redacted] meters. The latter two measurements are similar to dimensions of two of the peak-roofed crates.

25X1
25X1
25X1
25X1
25X1
25X1
25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

25X1
Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8



Next 2 Page(s) In Document Denied

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Table 13.
24-Meter Missile Component Railcars at Votkinsk Missile Final Assembly and Checkout Facility
This table in its entirety is classified TOP SECRET RUFF

Date	Assembly/ Checkout Area	Transshipment Area
[redacted]	5	9
	3	7
	3 prob	5
	5	8
	2	(not imaged)
	10	4
	7	9
	10	1
	9	1
	3	2
	3	1 prob
	3	1 prob
	7	0
	0	5
	3	5
	2*	0
	5	5
	5	7
	10	11
	16	12
	2	9

25X1

REFERENCES

IMAGERY

(TSR) All relevant KEYHOLE imagery acquired through [redacted] the information cutoff date, was used in the preparation of this report. 25X1

MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, scale 1:200,000 (UNCLASSIFIED; see data block for sheet numbers)

DOCUMENTS

1. NPIC. [redacted] RCA-09/0005/79, *SSM Developments at Selected Soviet Strategic Research, Development, and Production Installations (S)*, Mar 79 (TOP SECRET [redacted] 25X1 25X1
2. CIA, FIR-K-311/00818-79, *The 8K-96 [SS-13] System Components and Other Space Products Developed and Produced by the Arsenal Production Association in Leningrad*, 14 Sep 79 (CONFIDENTIAL) [redacted] 25X1
3. CIA/OWI. [redacted] WI 79-10001 J, *Soviet New-Generation Missiles and Space Launch Vehicles in Preflight Development*, Feb 79 (TOP SECRET [redacted] 25X1 25X1
4. NPIC. [redacted] RCA-09/0020/77, *SSM Developments at Selected Soviet Strategic Research, Development, and Production Installations (S)*, Jun 78 (TOP SECRET [redacted] 25X1 25X1
5. NPIC. [redacted] RCA-09/0011/71, *Omsk Airframe Plant 166*, Oct 70 (TOP SECRET [redacted] 25X1
   NPIC. [redacted] *Discussion and Evaluation* (TOP SECRET [redacted] 25X1
6. NPIC. [redacted] RCA-09/0002/72, *Omsk Airframe Plant 166*, Jul 71 (TOP SECRET [redacted] 25X1
7. NPIC. [redacted] RCA-09/0015/74, *Omsk Airframe Plant 166*, Oct 73 (TOP SECRET [redacted] 25X1
8. CIA/OWI. WIDR No 6181/79, 14 Sep 79 (TOP SECRET [redacted] 25X1
9. USAF/FTD. [redacted] DST-1830S-289-78-SAO, *Missile Industry Design and Development Resources—USSR (U)*, 4 May 78 (TOP SECRET [redacted] 25X1 25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

10. NPIC. [redacted] RCA-09/0002/71, *Omsk Rocket Engine Test Facility Gornaya Bitiya*, Aug 70 (TOP SECRET [redacted] 25X1
25X1
NPIC. [redacted] *Discussion and Evaluation* (TOP SECRET [redacted] 25X1
11. USAF/FTD. [redacted] SAO/ST-SS-16-13-72, *Soviet Space Launch Systems*, Nov 71 (TOP SECRET [redacted] 25X1
12. CIA/FBIS. JPRS L/8845, *Translation—Cosmodrome by A. P. Volskiy*, 7 Jan 80 (FOR OFFICIAL USE ONLY)
13. CIA. FIR-K-311/00210-79, *The 8K-84 (SS-11) and Other Missile Systems*, 27 Feb 79 (CONFIDENTIAL/[redacted] 25X1
14. NSA. G/00/1144-79, *Design and Production Work for the Soviet Salyut Program*, May 79 (TOP SECRET-[redacted] 25X1
15. CIA/WSSIC. [redacted] *Indications of Soviet Reusable Space Systems*, Nov 78 (TOP SECRET [redacted] 25X1
[redacted] 25X1
16. CIA/OWI. [redacted] *Weapons Intelligence Daily Review*, Jul 79 (TOP SECRET [redacted] 25X1
[redacted] 25X1
17. CIA. FIR-K-311/00211-79, *The 8K-84 (SS-11) Missile System Configuration and Description*, 27 Feb 79 (CONFIDENTIAL)
18. CIA. FIR-K-311/00317-79, *Organization of the 8K-84 [SS-11, SEGO] Missile System Civilian Handling Team and Handling Procedures at the Saratov Launch Complex*, 29 Mar 79 (CONFIDENTIAL/[redacted] 25X1
19. CIA. FIR-K-311/00235-79, *Assembly and Checkout Procedures of the 8K-84 (SS-11) Missile System at Fili (TsKBMF)*, 13 Mar 79 (CONFIDENTIAL/WNINTEL)
20. DIA. DST-1850S-007-79-SAO, *Rocket Propulsion Development and Test Programs and Facilities—ECC*, 5 Nov 79 (TOP SECRET [redacted] 25X1
21. CIA/OWI. [redacted] *Weapons Intelligence Daily Review*, 7 Feb 80 (TOP SECRET [redacted] 25X1
22. NPIC. [redacted] RCA-09/0019/79, *Petropavlovsk Vehicle Assembly Plant and Petropavlovsk Probable Missile Assembly Facility (S)*, Aug 79 (TOP SECRET [redacted] 25X1 25X1
23. CIA/OWI. [redacted] WI WIDR 78-109J, *Weapons Intelligence Daily Review*, 6 Jun 78 (TOP SECRET [redacted] 25X1
[redacted] 25X1

*Extracted information is classified TOP SECRET [redacted] 25X1
**Extracted information is classified TOP SECRET
***Extracted information is classified TOP SECRET
****Extracted information is classified TOP SECRET

REQUIREMENT

COMIREX J02
Project 200010DJ

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Soviet Strategic Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1 25X1

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8

Sanitized Copy Approved for Release 2010/10/27 : CIA-RDP80T01355A000100540001-8